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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): <b>Silver et al.</b>	
Serial No.: <b>to be determined</b>	Group Art Unit: <b>2621</b>
Filed: <b>11/10/2003</b>	Examiner: <b>Mariam, Daniel G.</b>
Title: <b>Fast High-Accuracy Multi-Dimensional Pattern Inspection</b>	
Attorney Docket No.: <b>C97-050_CON13</b>	

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Dear Sir:

This Information Disclosure Statement is submitted:

- under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)
- under 37 CFR 1.97(c) together with either a:
  - Statement under 37 CFR 1.97(e), or
  - a \$180.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- under 37 CFR 1.97(d) together with a:
  - Statement under 37 CFR 1.97(e), and
  - a \$180.00 fee set forth in 37 CFR 1.17(p).  
(Filed after final action or notice of allowance, whichever occurs first, but before payment of the issue fee)

Applicant(s) submit herewith Form PTO 1449-Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

The relevance of the attached references is that this is the closest art of which Applicant is aware.

Applicant submits that the above references taken alone or in combination neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

It is requested that the information disclosed herein be made of record in this application.

Respectfully submitted,

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, or the correspondence is being facsimile transmitted to the USPTO, on the date indicated below.

Date of Deposit: 11/10/03

Typed Name: Cheryl Sloane

Signature:



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Arthur J. O'Dea  
Attorney/Agent for Applicant(s)  
Reg. No. 42,952  
**Customer Number 23459**  
Date: November 7, 2003

Telephone No.: (508) 650-3108

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>				<b>Application Number</b>	Not Known
				<b>Filing Date</b>	11/10/2003
				<b>First Named Inventor</b>	Silver et al.
				<b>Group Art Unit</b>	2621
				<b>Examiner Name</b>	D. Mariam
<i>(use as many sheets as necessary)</i>				<b>Attorney Docket Number</b>	C97-050 CON13
Sheet	1	of	3		

## U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

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3

### Complete if Known

Application Number	Not Known
Filing Date	11/10/2003
First Named Inventor	Silver, et al.
Group Art Unit	2621
Examiner Name	D. Mariam

Attorney Docket Number C97-050 CON13

### OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		COGNEX CORPORATION, "Description Sobel Search," Natick, MA USA, 1998 but public before the above-referenced filing date.	
		COGNEX CORPORATION, "Chapter 7 CONLPAS," Cognex 3000/4000/5000 Programmable Vision Engines, Vision Tools, 1996, pp. 307-340, Revision 7.4 590-0136, Natick, MA USA	
		HU, YU HEN, "CORDIC-Based VLSI Architectures for Digital Signal Processing," IEE Signal Processing Magazine, July 1992, pp. 16-35, 1053-5888/92, USA	
		HU, et al, "Expanding the Range of Convergence of the CORDIC Algorithm," IEEE Transactions on computers, January 1991, pp. 13-21, Vol. 40, No. 1, USA	
		Ballard, D.H., "Generalizing the Hough Transform to Detect Arbitrary Shapes," Pattern Recognition, 1981, pp. 111-122, Vol. 13, No. 2, Pergamon Press Ltd., UK	
		LIN, et al., "On-Line CORDIC Algorithms," IEEE Transactions on Computers, pp. 1038-1052, Vol. 39, No. 8, USA	
		WALLACK, AARON SAMUEL, "Chapter 4 Robust Algorithms for Object Localization," Algorithms and Techniques for Manufacturing, 1995, pp. 97-148 (and Bibliography pp. 324-335) PhD thesis, University of California at Berkeley, USA	
		JAMES D. FOLEY, ANDRIES VAN DAM, STEVEN K. FEINER, JOHN F. HUGHES, Second Edition in C, Introduction to Computer Graphics, pp. 36-49, Addison-Wesley Publishing Company, 1994, USA	
		LISA GOTTFESFELD BROWN, <u>A Survey of Image Registration Techniques</u> , Department of Computer Science, Columbia University, New York, NY 10027, ACM Computing Surveys, Vol. 24, No. 4, December 1992	
		GUNILLA BORGEFORS, <u>Hierarchical Chamfer Matching: A Parametric Edge Matching Algorithm</u> , IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 10, No. 6, November 1988	

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Sheet	3	of	3														

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